FEB 03 2004
PATENT & TRADEMARK OFFICE

FIG. 1

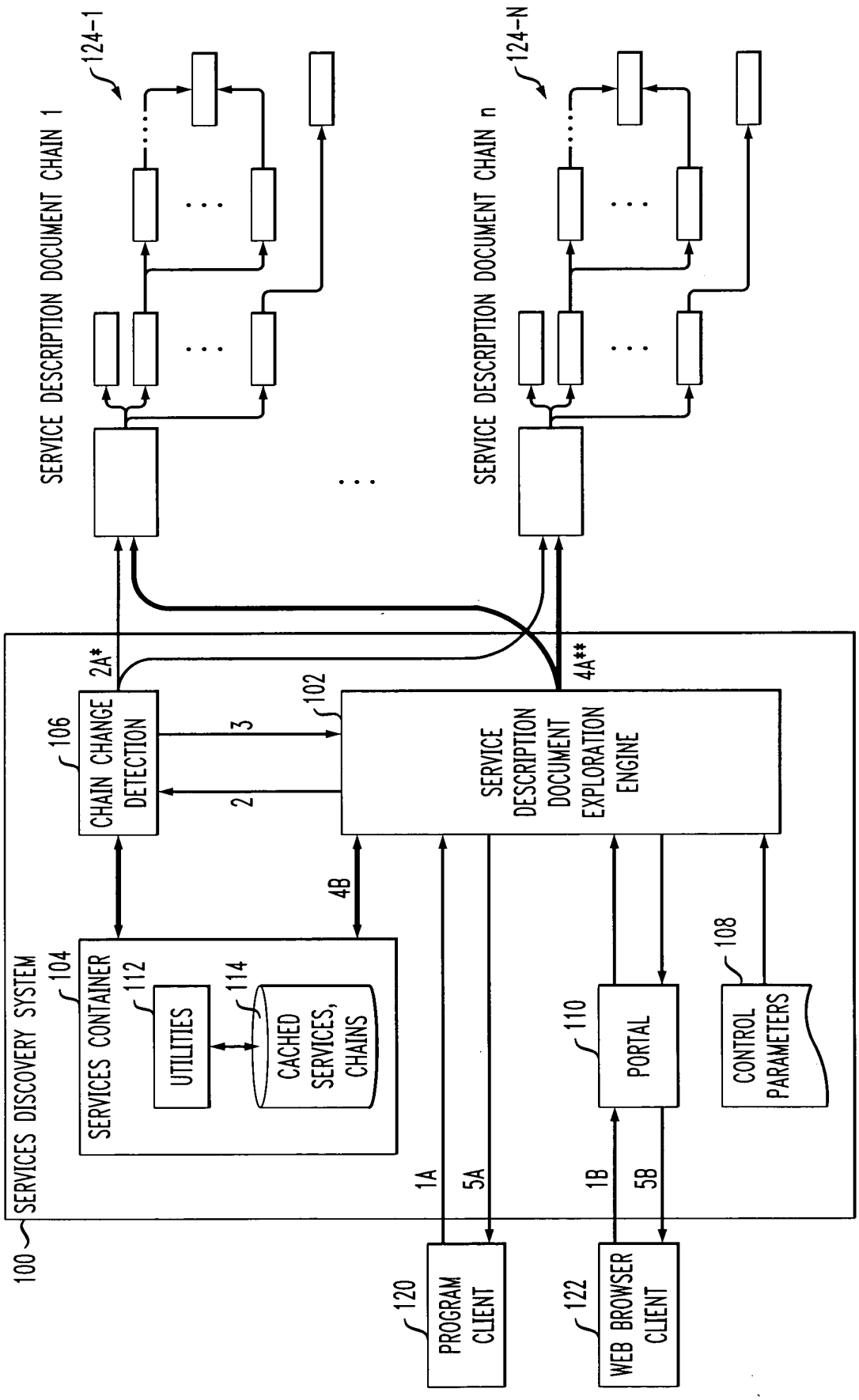


FIG. 2

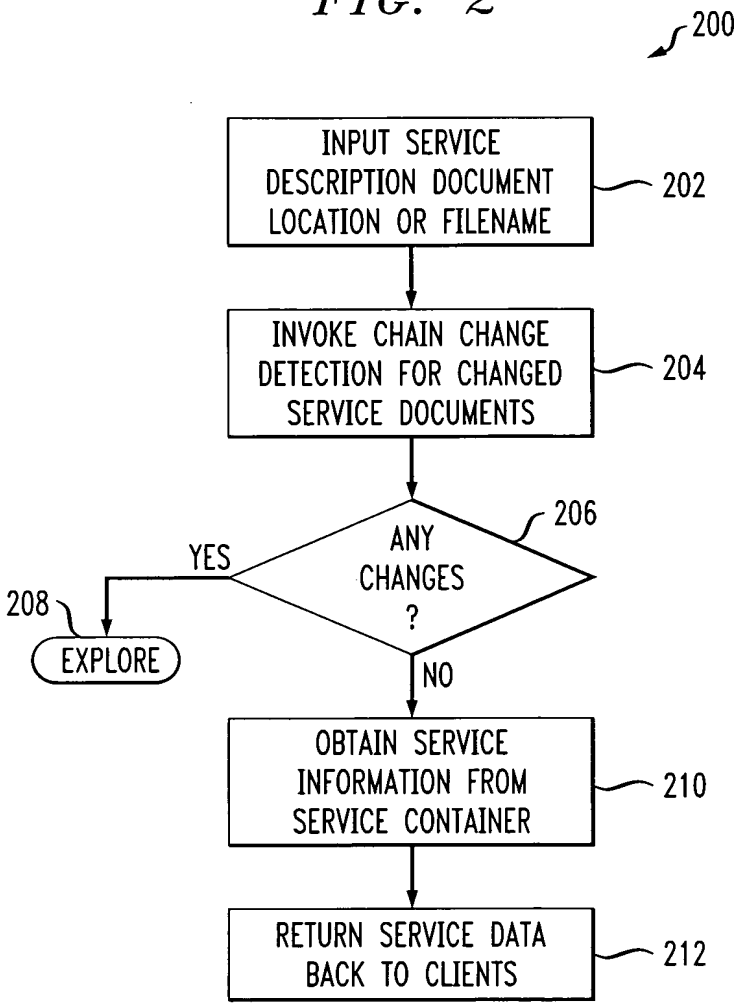

200
INPUT SERVICE DESCRIPTION DOCUMENT LOCATION OR FILENAME
202
INVOKE CHAIN CHANGE DETECTION FOR CHANGED SERVICE DOCUMENTS
204
ANY CHANGES ?
206
YES
208
EXPLORE
NO
OBTAIN SERVICE INFORMATION FROM SERVICE CONTAINER
210
RETURN SERVICE DATA BACK TO CLIENTS
212

FIG. 3

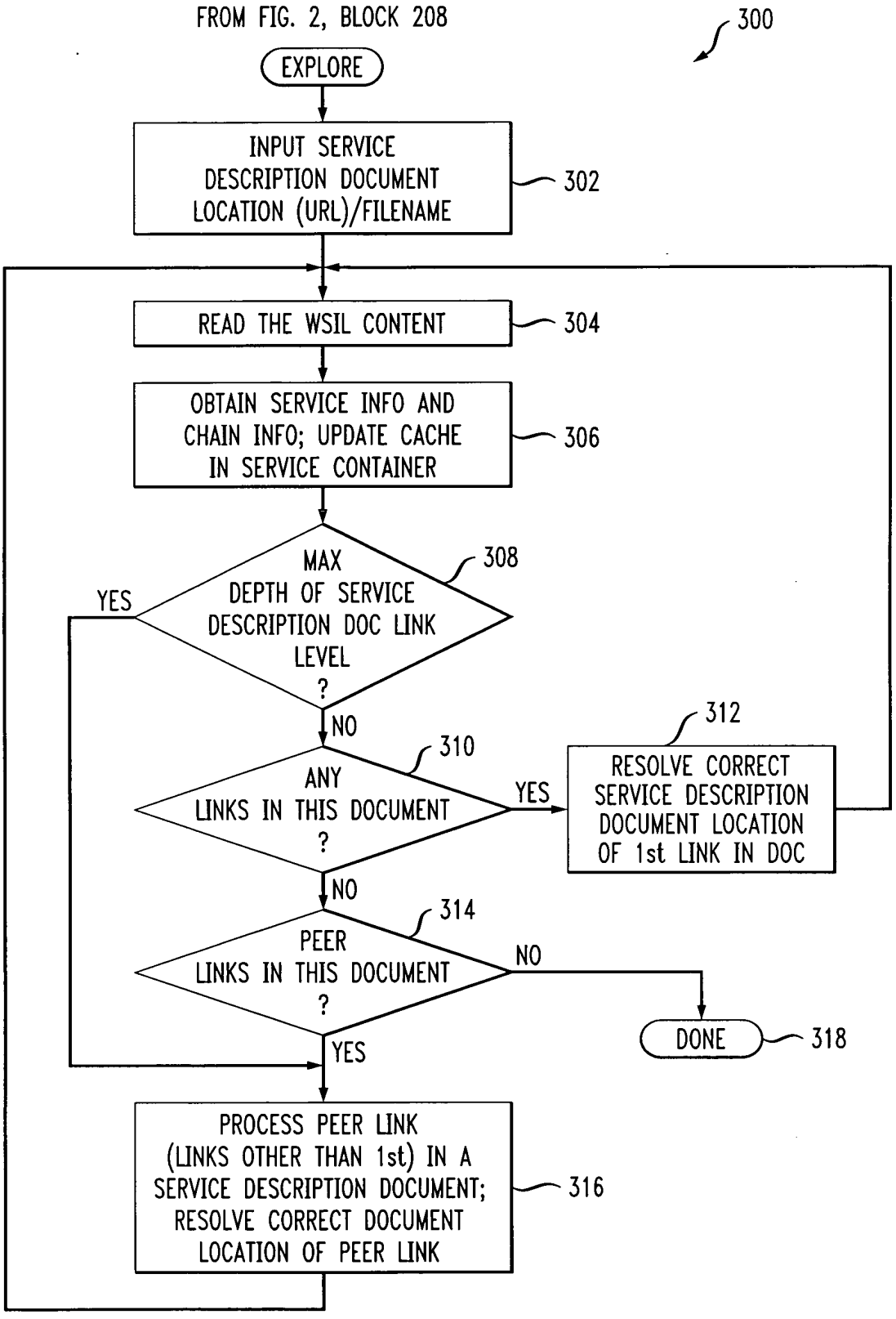

FROM FIG. 2, BLOCK 208
300
EXPLORE
INPUT SERVICE DESCRIPTION DOCUMENT LOCATION (URL)/FILENAME
302
READ THE WSIL CONTENT
304
OBTAIN SERVICE INFO AND CHAIN INFO; UPDATE CACHE IN SERVICE CONTAINER
306
MAX DEPTH OF SERVICE DESCRIPTION DOC LINK LEVEL ?
308
YES
NO
ANY LINKS IN THIS DOCUMENT ?
310
YES
RESOLVE CORRECT SERVICE DESCRIPTION DOCUMENT LOCATION OF 1st LINK IN DOC
312
NO
PEER LINKS IN THIS DOCUMENT ?
314
NO
DONE
318
YES
PROCESS PEER LINK (LINKS OTHER THAN 1st) IN A SERVICE DESCRIPTION DOCUMENT; RESOLVE CORRECT DOCUMENT LOCATION OF PEER LINK
316

FIG. 4

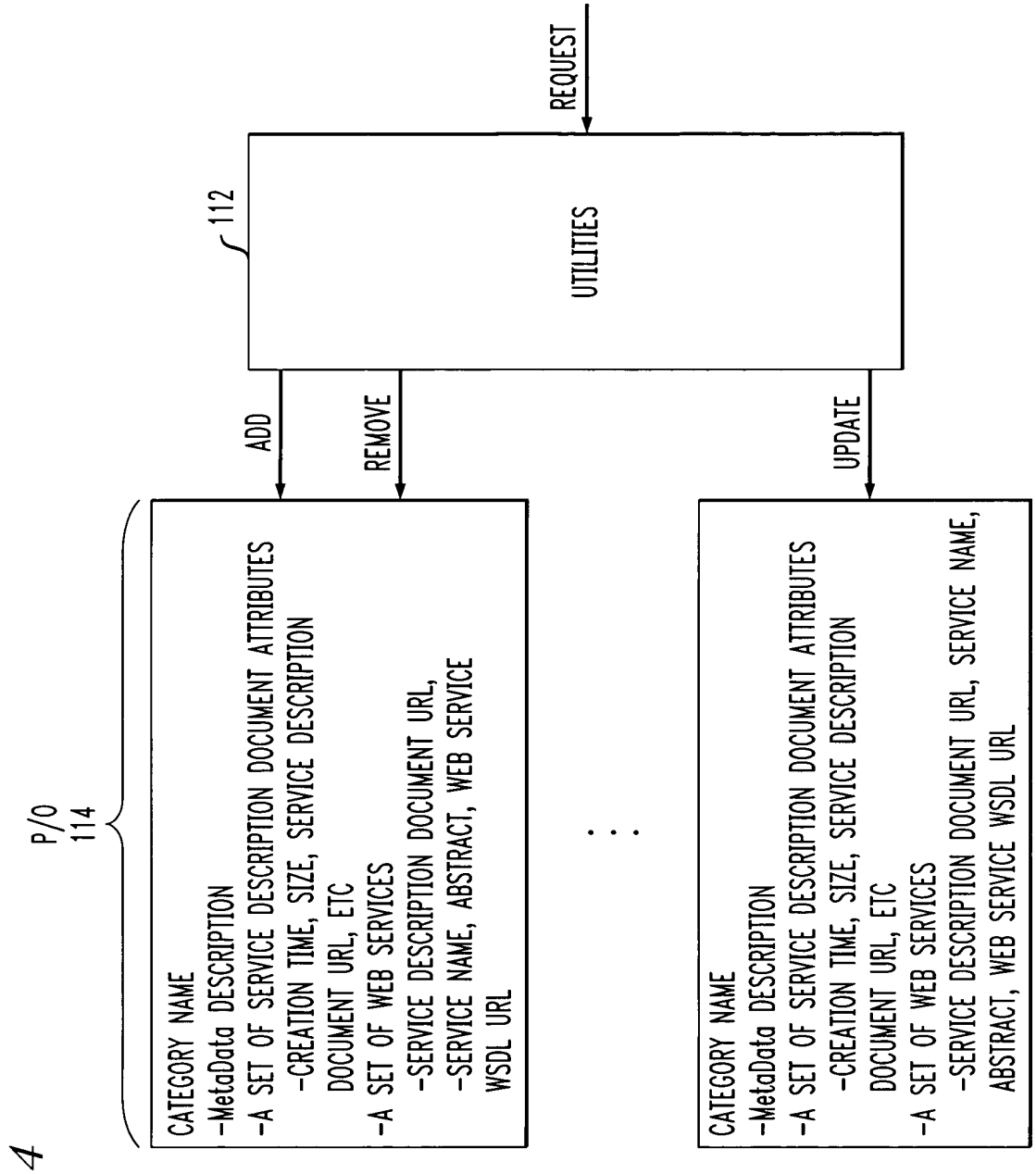
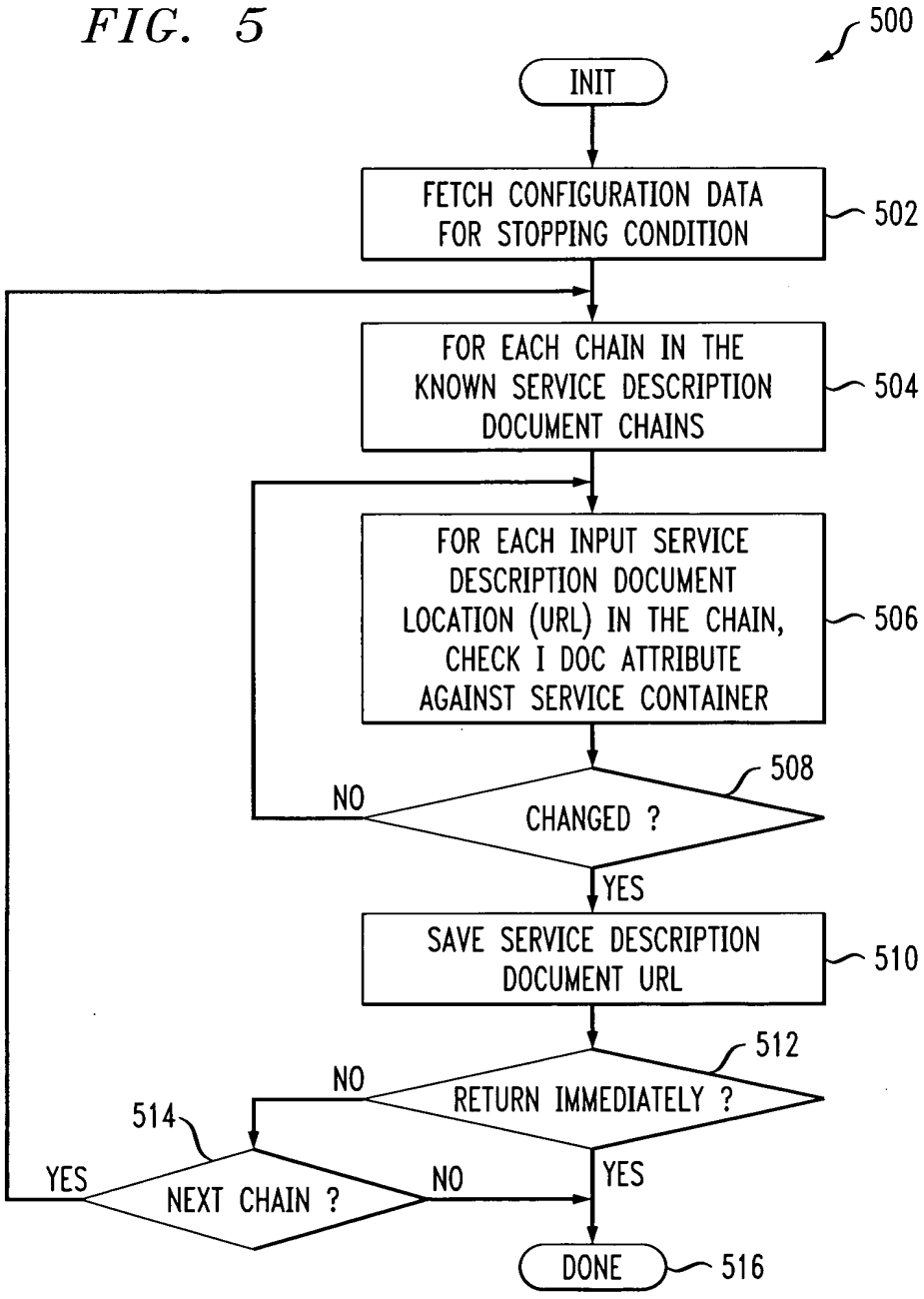

REQUEST
112
UTILITIES
ADD
REMOVE
UPDATE
P/O
114
CATEGORY NAME
-MetaData DESCRIPTION
-A SET OF SERVICE DESCRIPTION DOCUMENT ATTRIBUTES
-CREATION TIME, SIZE, SERVICE DESCRIPTION DOCUMENT URL, ETC
-A SET OF WEB SERVICES
-SERVICE DESCRIPTION DOCUMENT URL, -SERVICE NAME, ABSTRACT, WEB SERVICE WSDL URL
CHAIN 1
CATEGORY NAME
-MetaData DESCRIPTION
-A SET OF SERVICE DESCRIPTION DOCUMENT ATTRIBUTES
-CREATION TIME, SIZE, SERVICE DESCRIPTION DOCUMENT URL, ETC
-A SET OF WEB SERVICES
-SERVICE DESCRIPTION DOCUMENT URL, SERVICE NAME, ABSTRACT, WEB SERVICE WSDL URL
CHAIN n

FIG. 5


500
INIT
FETCH CONFIGURATION DATA FOR STOPPING CONDITION
502
FOR EACH CHAIN IN THE KNOWN SERVICE DESCRIPTION DOCUMENT CHAINS
504
FOR EACH INPUT SERVICE DESCRIPTION DOCUMENT LOCATION (URL) IN THE CHAIN, CHECK I DOC ATTRIBUTE AGAINST SERVICE CONTAINER
506
508
CHANGED ?
NO
YES
SAVE SERVICE DESCRIPTION DOCUMENT URL
510
512
RETURN IMMEDIATELY ?
NO
YES
514
NEXT CHAIN ?
YES
NO
DONE
516

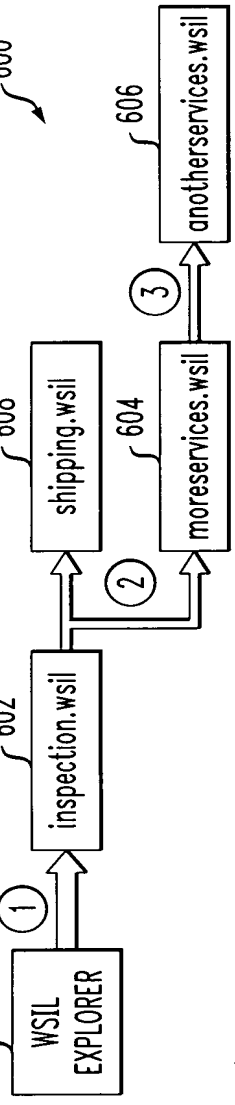

600
102
WSIL EXPLORER
1
602
inspection.wsil
2
608
shipping.wsil
604
moreservices.wsil
3
606
anotherservices.wsil

FIG. 6

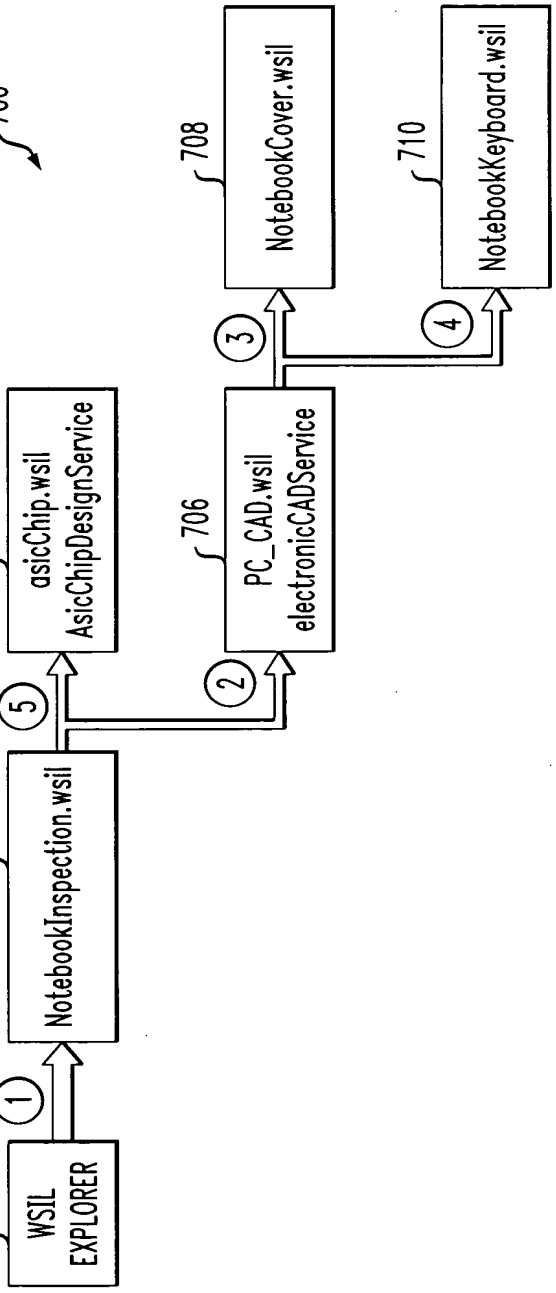

700
102
WSIL EXPLORER
1
702
NotebookInspection.wsil
5
704
asicChip.wsil
AsicChipDesignService
2
706
PC_CAD.wsil
electronicCADService
3
708
NotebookCover.wsil
4
710
NotebookKeyboard.wsil

FIG. 7

FIG. 8

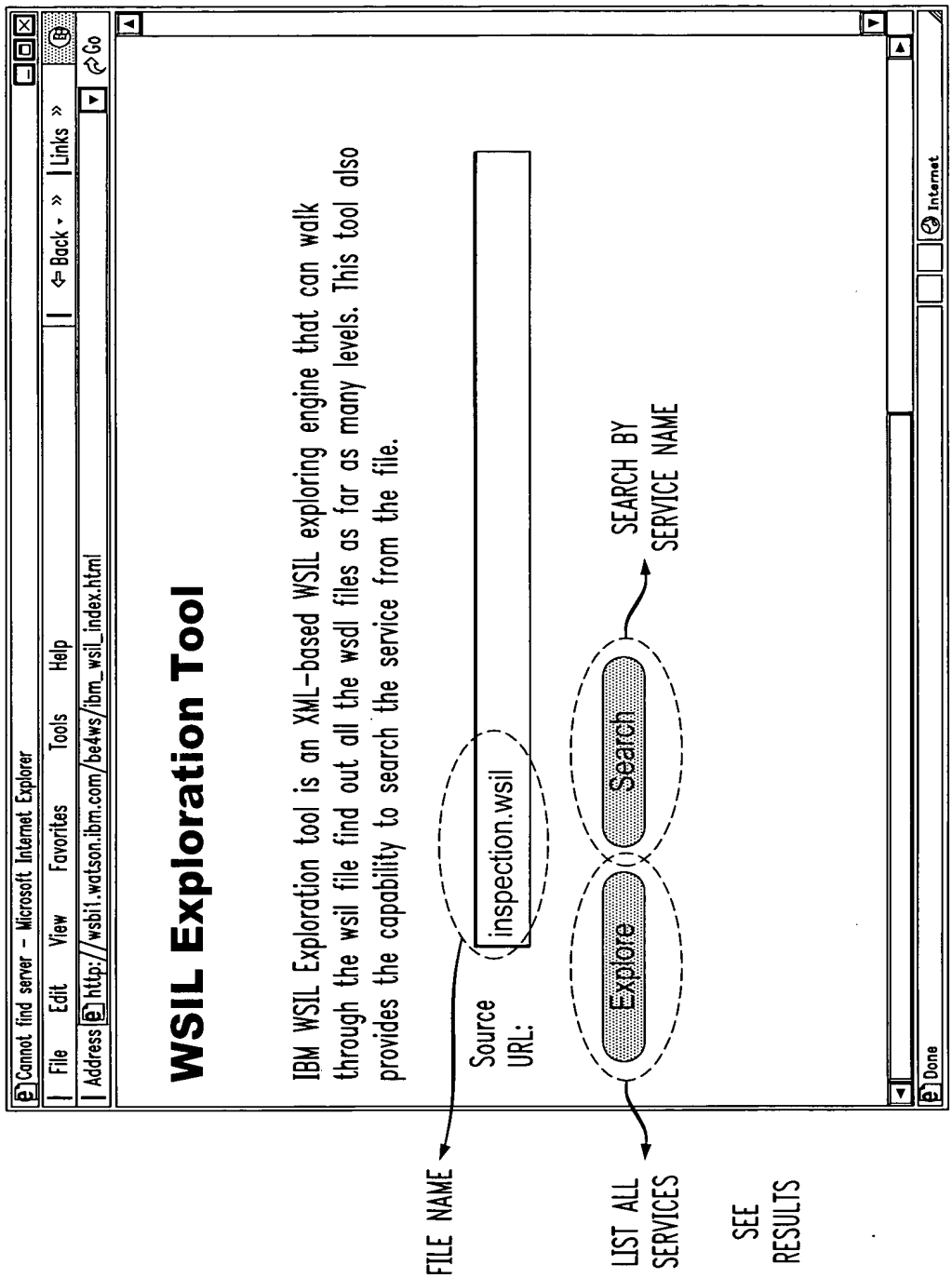

Cannot find server - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Links
Address http://wsbi1.watson.ibm.com/be4ws/ibm_wsil_index.html
Go
WSIL Exploration Tool
IBM WSIL Exploration tool is an XML-based WSIL exploring engine that can walk through the wsil file find out all the wsdl files as far as many levels. This tool also provides the capability to search the service from the file.
Source URL:
inspection.wsil
Explore
Search
SEARCH BY SERVICE NAME
FILE NAME
LIST ALL SERVICES
SEE RESULTS
Done
Internet

FIG. 9

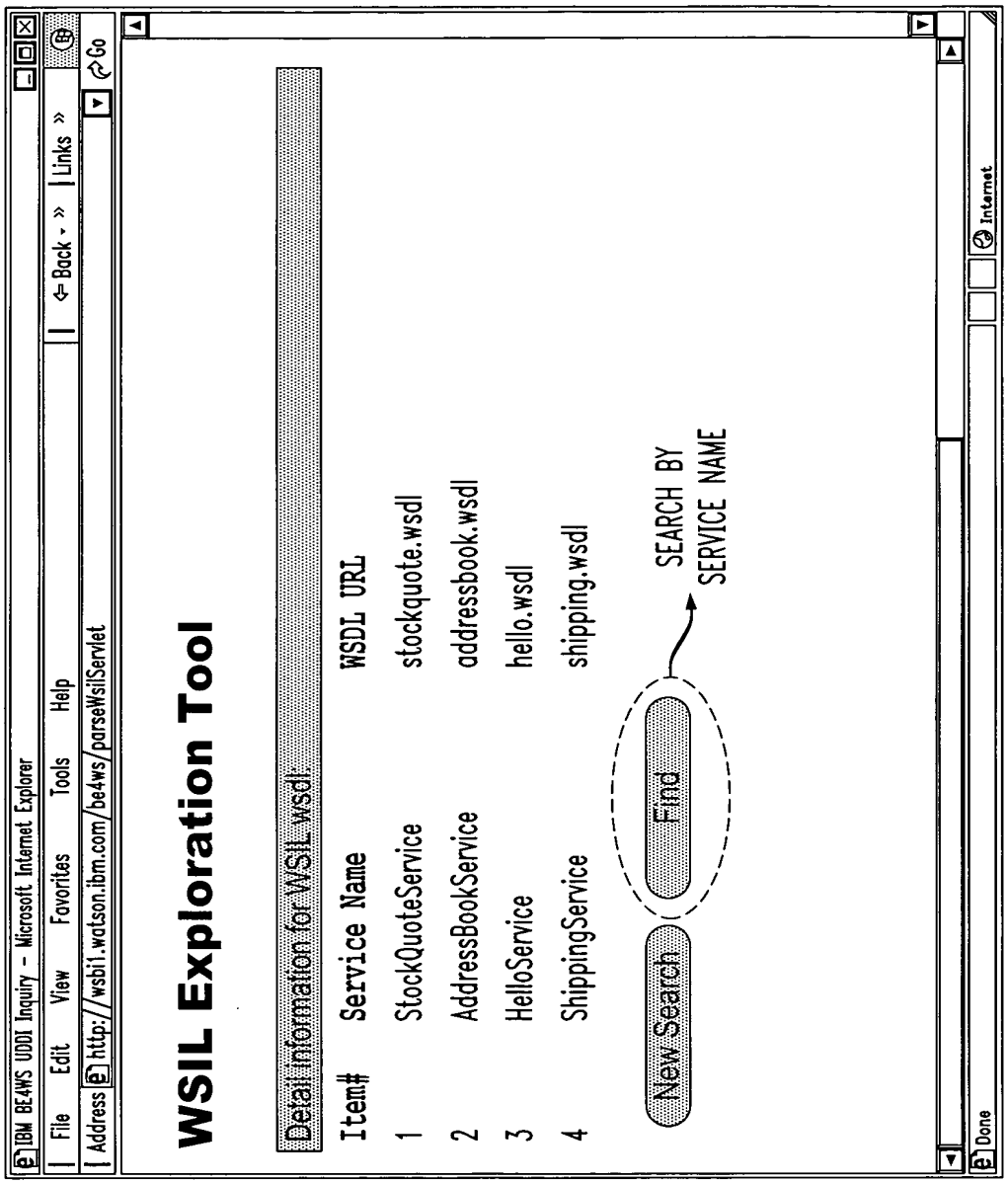

IBM BE4WS UDDI Inquiry - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Links
Address
http://wsbi1.watson.ibm.com/be4ws/parseWsilServlet
Go
WSIL Exploration Tool
Detail information for WSIL wsdl
Item#
Service Name
WSDL URL
1
StockQuoteService
stockquote.wsdl
2
AddressBookService
addressbook.wsdl
3
HelloService
hello.wsdl
4
ShippingService
shipping.wsdl
New Search
Find
SEARCH BY
SERVICE NAME
Done
Internet

FIG. 10

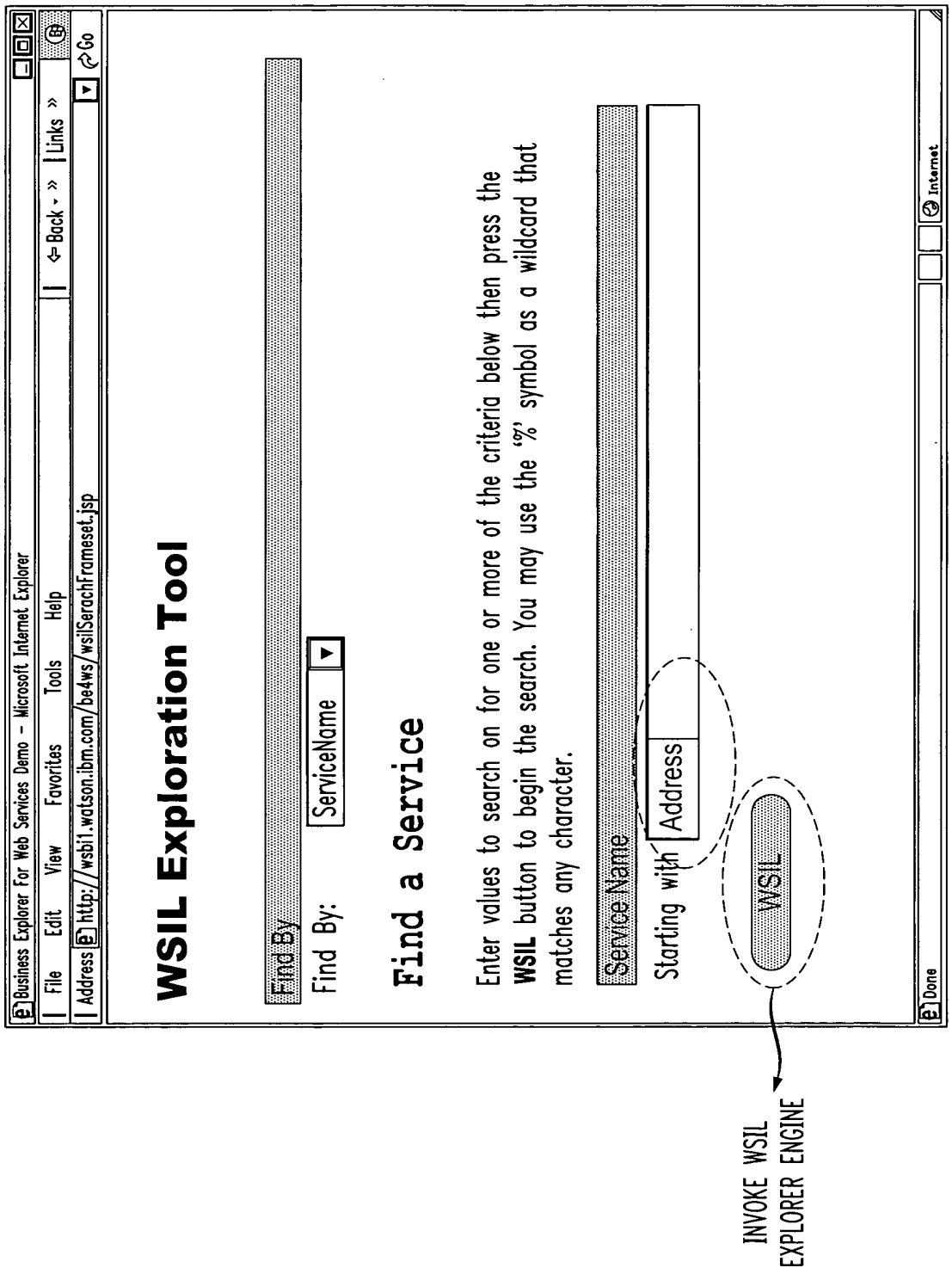

Business Explorer For Web Services Demo - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Links
Address http://wsbi1.watson.ibm.com/be4ws/wsilSerachFrameset.jsp
Go
WSIL Exploration Tool
Find By
Find By: ServiceName
Find a Service
Enter values to search on for one or more of the criteria below then press the WSIL button to begin the search. You may use the '%' symbol as a wildcard that matches any character.
Service Name
Starting with Address
WSIL
Done
Internet
INVOKE WSIL EXPLORER ENGINE

FIG. 11

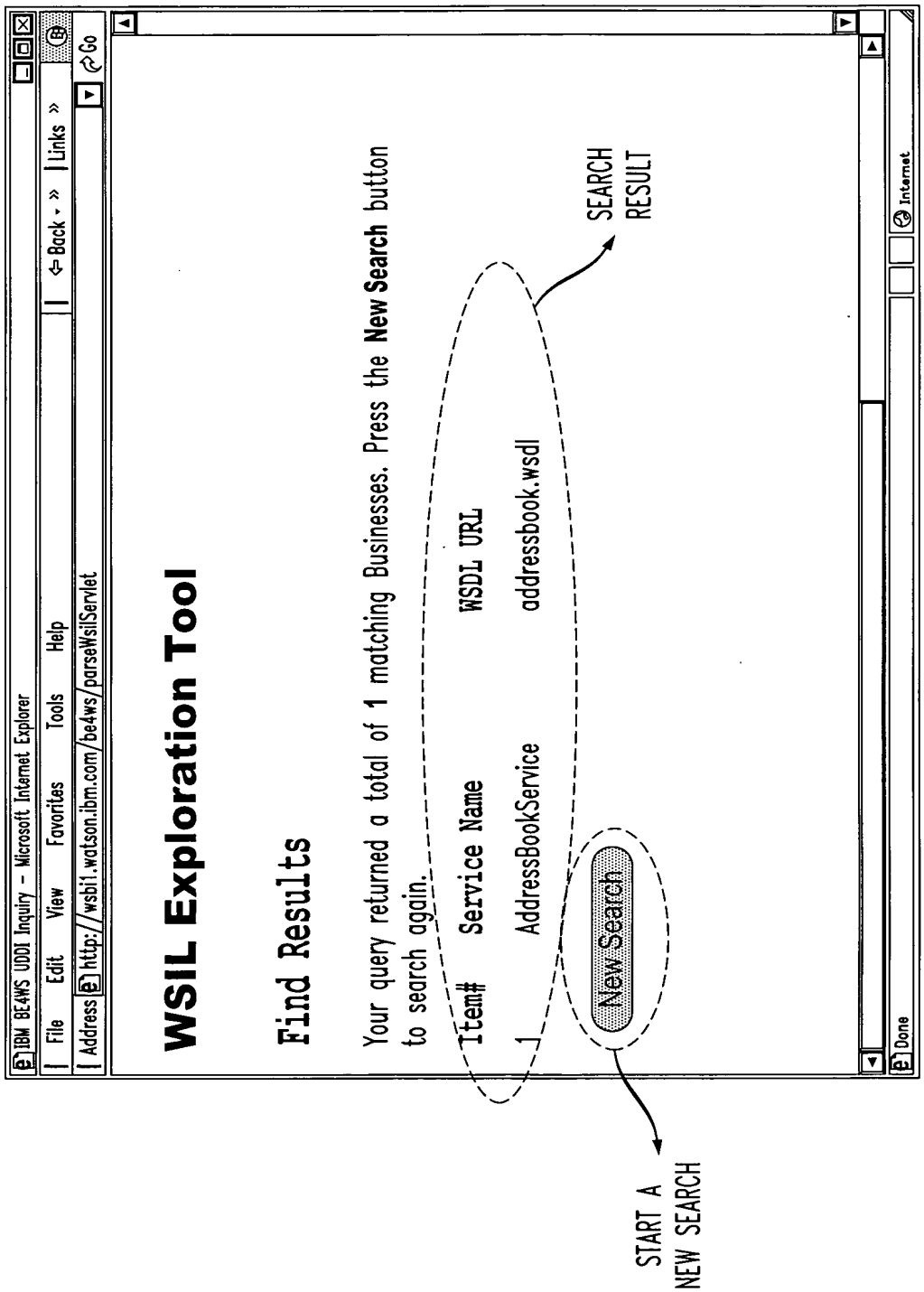
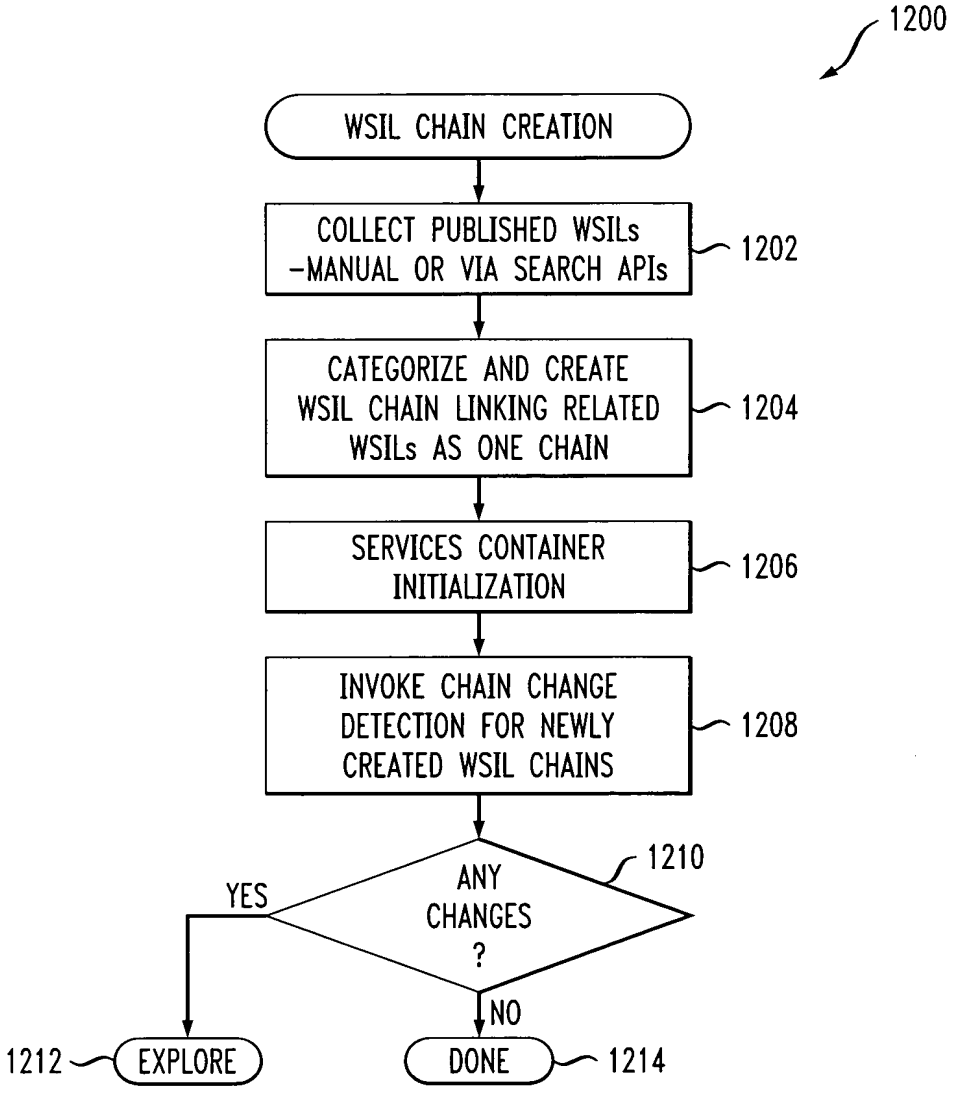

IBM BE4WS UDDI Inquiry - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Links
Address http://wsbi1.watson.ibm.com/be4ws/parseWsilServlet
Go
WSIL Exploration Tool
Find Results
Your query returned a total of 1 matching Businesses. Press the New Search button to search again.
Item# Service Name WSDL URL
1 AddressBookService addressbook.wsdl
New Search
SEARCH RESULT
START A NEW SEARCH
Done
Internet

FIG. 12


1200
WSIL CHAIN CREATION
COLLECT PUBLISHED WSILs -MANUAL OR VIA SEARCH APIs
1202
CATEGORIZE AND CREATE WSIL CHAIN LINKING RELATED WSILs AS ONE CHAIN
1204
SERVICES CONTAINER INITIALIZATION
1206
INVOKE CHAIN CHANGE DETECTION FOR NEWLY CREATED WSIL CHAINS
1208
ANY CHANGES ?
1210
YES
NO
1212
EXPLORE
DONE
1214

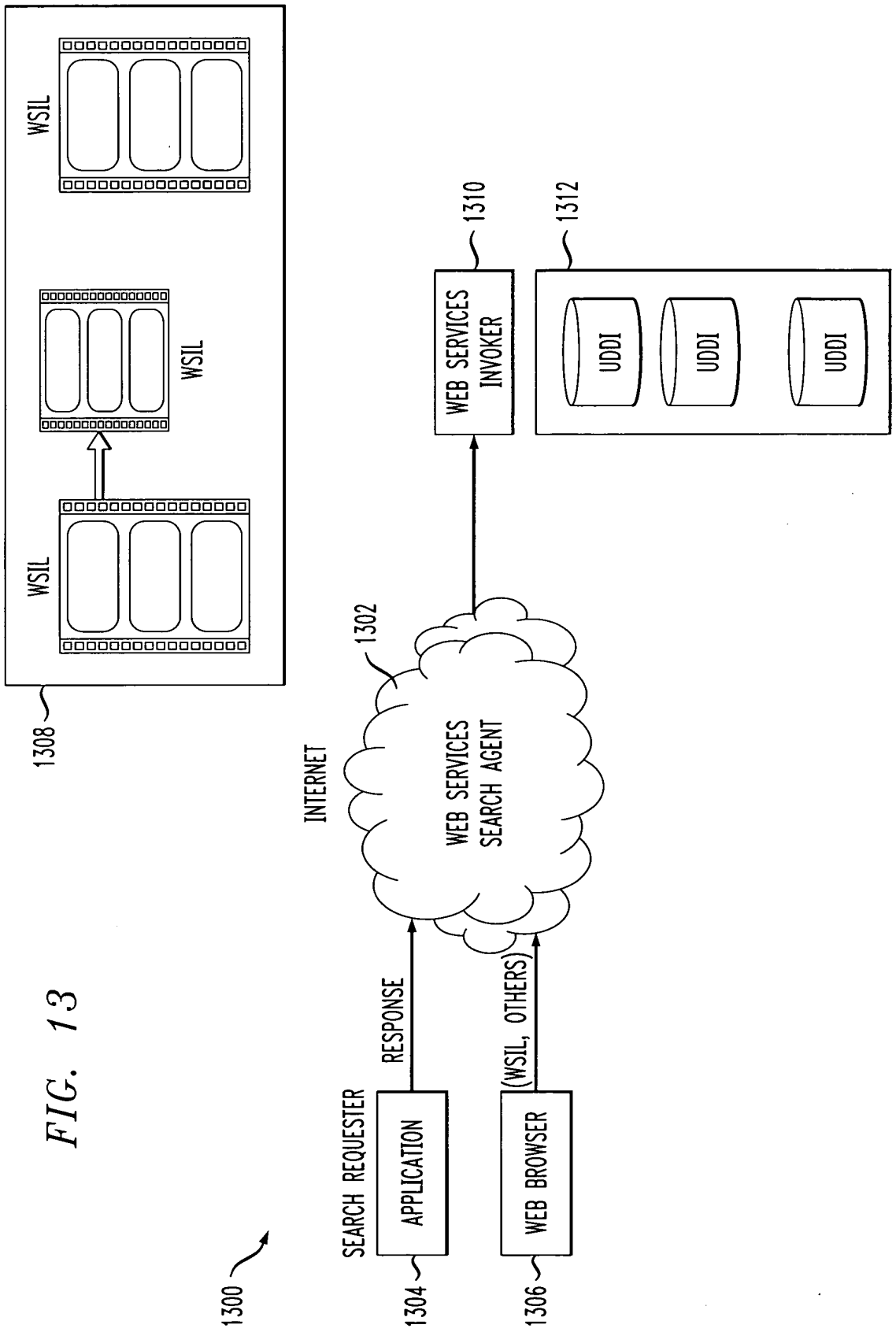

1300
SEARCH REQUESTER
APPLICATION
1304
RESPONSE
(WSIL, OTHERS)
WEB BROWSER
1306
INTERNET
1302
WEB SERVICES
SEARCH AGENT
WEB SERVICES
INVOKER
1310
UDDI
UDDI
UDDI
1312
1308
WSIL
WSIL
WSIL

FIG. 13

FIG. 14

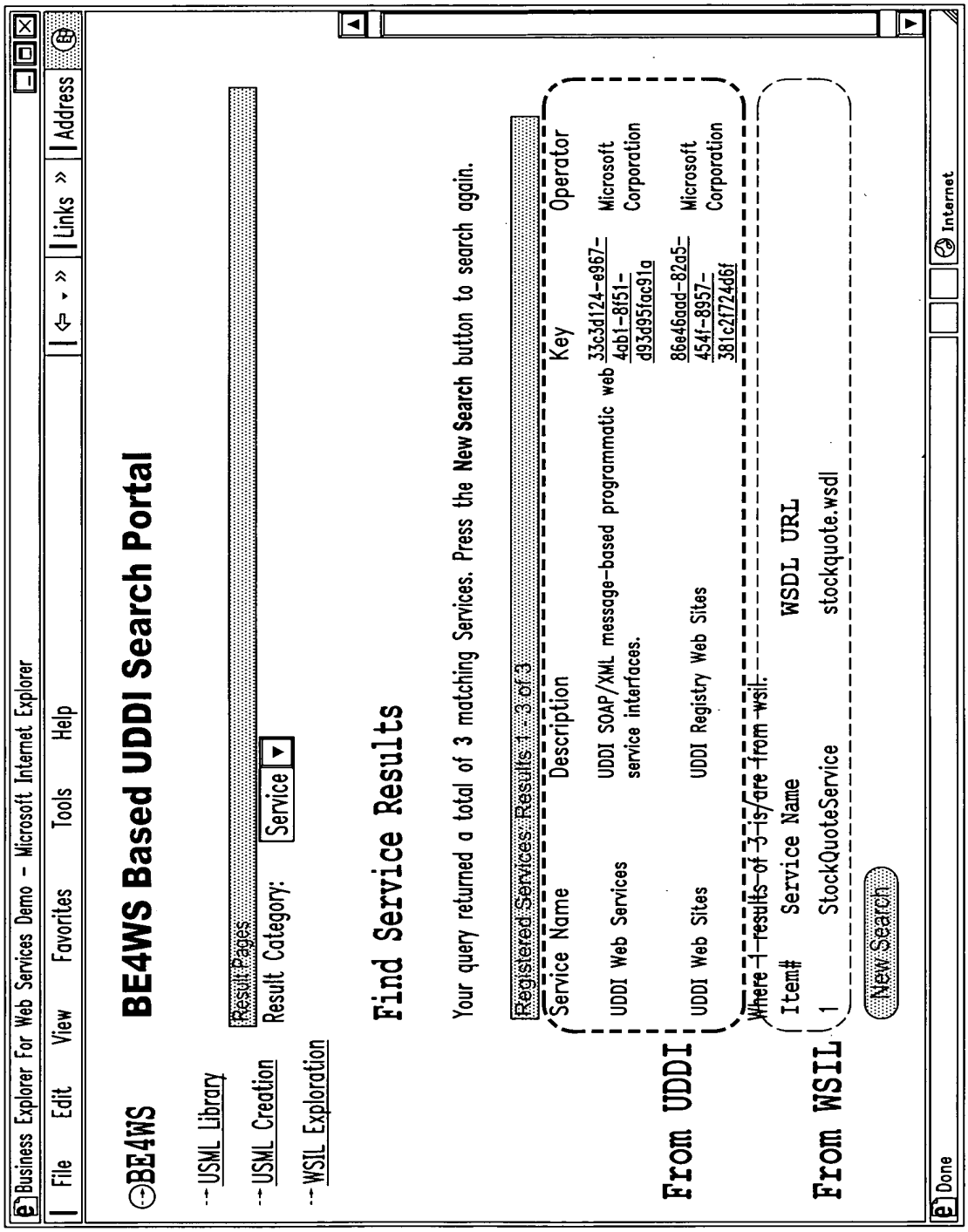
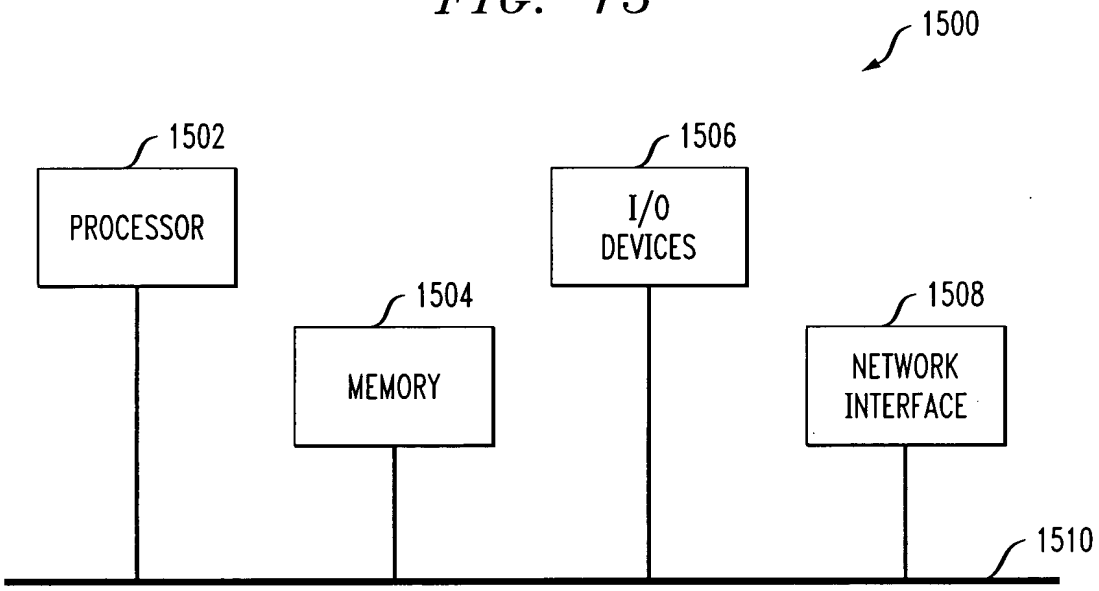

Business Explorer For Web Services Demo - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Links » Address
BE4WS
BE4WS Based UDDI Search Portal
USML Library
USML Creation
WSIL Exploration
Result Pages
Result Category: Service
Find Service Results
Your query returned a total of 3 matching Services. Press the New Search button to search again.
Registered Services: Results 1 - 3 of 3
From UDDI
Service Name
Description
Key
Operator
UDDI Web Services
UDDI SOAP/XML message-based programmatic web service interfaces.
33c3d124-e967-4ab1-8f51-d93d95fac91a
Microsoft Corporation
UDDI Web Sites
UDDI Registry Web Sites
86e46aad-82a5-454f-8957-381c2f724d6f
Microsoft Corporation
Where 1 results of 3 is/are from wsil:
From WSIL
Item#
Service Name
WSDL URL
1
StockQuoteService
stockquote.wsdl
New Search
Done
Internet

FIG. 15


1500
1502
PROCESSOR
1504
MEMORY
1506
I/O
DEVICES
1508
NETWORK
INTERFACE
1510